

**CLAIMS:**

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1. A data processing system to enable the formulation of multi-party investment contracts, the system comprising:

- 5           input means by which an ordering party can input contract data relating to a least one phenomenon, each said phenomenon having a range of future outcomes and a future time of maturity, the contract data including a set of probabilities of occurrence for each outcome in said range and a consideration due to a counterparty at or after the time of maturity, and further by which at least one counterparty can input registering
- 10   data including a set of probabilities of occurrence for each outcome in said range; and
- data processing means operable to price and match a contract for a said phenomenon from said contract data and said registering data, the pricing including:
- applying at least one template of entitlement as a function of outcome to each counterparty's set of probabilities to give one or more
- 15   individual counterparty prices each equal to the ordering party's consideration; and
- applying the ordering party set of probabilities to each said template to derive an implied entitlement;
- the matching including:
- 20   determining which counterparty will provide the best entitlement on maturity by comparing each implied entitlement with the consideration; and
- matching the contract with that counterparty having the template for the best said comparison.

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2. A data processing system as claimed in claim 1, wherein, in the pricing, application of a template results in the multiplication of each elemental entitlement with each probability, and the summing of the products.

3. A data processing system as claimed in claim 2, further wherein a discount factor is applied to the sum to give a present day price relative to the time of maturity.

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4. A data processing system as claimed in any one of claims 1 to 3, wherein, in the pricing, each template is applied to the ordering party set of probabilities, and a multiplication of the elemental entitlements with each probability performed, and the products summed to give the implied entitlement.

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5. A data processing system as claimed in claim 4, wherein the said sum has a discount rate applied to give a present day value relative to the time of maturity.

6. A data processing system as claimed in any one of the preceding  
15 claims, wherein the contract data further includes a minimum expected entitlement against which the counterparty prices are compared for the purpose of accepting ones thereof for the matching.

7. A data processing system as claimed in any one of the preceding  
20 claims, wherein the contract data includes a constraint on the one or more templates applied by the data processing means.

8. A data processing system as claimed in any one of the preceding  
claims, wherein the data processing means periodically reprices the contract data for a  
25 matched contract to derive one or more implied entitlements for one or more counterparties.

9. A data processing system to enable the formulation of potential multi-party investments contracts, the system comprising:

input means by which an ordering party can input contract data relating to a least one phenomenon, each said phenomenon having a range of future outcomes and a future time of maturity, the contract data including a set of probabilities of occurrence for each outcome in said range and a consideration due to a counterparty at or after the time of maturity, and further by which at least one counterparty can input registering data including a set of probabilities of occurrence for each outcome in said range; and

data processing means operable to price a contract for a said phenomenon from said contract data and said registering data, the pricing including:

applying at least one template of entitlement as a function of outcome to each counterparty's set of probabilities to give one or more individual counterparty prices each equal to the ordering party's consideration; and

applying the ordering party set of probabilities to each said template to derive an implied entitlement.

10. A data processing system to enable the formulation of potential multi-party investments contracts, the system comprising:

input means by which an ordering party can input contract data relating to a least one phenomenon, each said phenomenon having a range of future outcomes and a future time of maturity, the contract data including a set of probabilities of occurrence for each outcome in said range and a consideration due to a counterparty at or after the time of maturity, and further by which at least one counterparty can input registering data including a set of probabilities of occurrence for each outcome in said range; and

data processing means operable to price and match a contract for a said phenomenon from said contract data and said registering data, the pricing including:

dividing the consideration into integer components, and for each

component:

applying at least one template of entitlement as a function of outcome  
to each counterparty's set of probabilities to give one or more

5 individual counterparty prices each equal to the ordering party's  
component consideration; and

applying the ordering party set of probabilities to each said template to  
derive an implied component entitlement;

the matching including:

10 determining which counterparty will provide the best entitlement on  
maturity by comparing each implied component entitlements with the  
consideration; and

matching the contract with the counterparties having the templates for  
the best said component comparisons.

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11. A method for the formulation of multi-party investment contracts, the  
method comprising the steps of:

inputting ordering party contract data relating to at least one phenomenon, each  
said phenomenon having a range of future outcomes and a future time of maturity, the  
20 contract data including a set of probabilities of occurrence for each outcome in said  
range and a consideration due to a counterparty at or after the time of establishment;

inputting counterparty registering data including a set of probabilities of  
occurrence for each outcome in said range; and

pricing and matching a contract for a said phenomenon from said contract data  
25 and said registering data, said step of pricing, for each counterparty, including:

applying at least one template of entitlement as a function of outcome to the set  
of probabilities to give one or more individual counterparty prices; and

applying the ordering party set of probabilities to each individual counterparty

template to derive an implied entitlement;

said step of matching including:

determining which counterparty will provide the best entitlement on maturity

5 by comparing the implied entitlements with the consideration; and

matching the contract with the counterparty having the template for the best

said comparison.

12. A method as claimed in claim 11, whereby the step of pricing  
10 comprises the further steps of multiplying each elemental entitlement with each  
probability and summing the products.

13. A method as claimed in claim 11, comprising the further step of  
applying a discount factor to the sum to give a present day price relative to the time of  
15 maturity.

14. A method as claimed in any one of claims 11 to 13, whereby the step  
of pricing comprises the further steps of applying each template to the ordering party  
set of probabilities, multiplying the elemental entitlements with each probability, and  
20 summing the products to give the implied entitlement.

15. A method as claimed in claim 14, comprising the further step of  
applying a discount rate to the sum to give a present day value relative to the time of  
maturity.

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16. A method as claimed in any one of claims 12 to 15, whereby the  
contract data further includes a minimum expected entitlement, and the step of pricing

further including the step of comparing the minimum expected entitlement against the  
counterparty prices to accept ones thereof for the step of matching.

17. A method as claimed in any one of claims 12 to 16, whereby the  
5 contract data includes a constraint on the one or more templates applied in the step of  
giving the individual counterparty prices.

18. A method as claimed in any one of claims 11 to 17, comprising the  
further step of periodically repricing the contract data for a matched contract to derive  
10 one or more implied entitlements for one or more counterparties.

19. A method for the formulation of potential multi-party investments  
contracts, the method comprising the steps of:  
inputting ordering party contract data relating to at least one phenomenon, each  
15 said phenomenon having a range of future outcomes and a future time of maturity, the  
contract data including a set of probabilities of occurrence for each outcome in said  
range and a consideration due to a counterparty at or after the time of establishment;  
inputting counterparty registering data including a set of probabilities of  
occurrence for each outcome in said range; and  
20 pricing a potential contract for a said phenomenon from said contract data and  
said registering data, said step of pricing, for each counterparty, including:  
applying at least one template of entitlement as a function of outcome to the set  
of probabilities to give one or more individual counterparty prices; and  
applying the ordering party set of probabilities to each individual counterparty  
25 template to derive an implied entitlement.

20. A method for the formulation of multi-party investment contracts, the  
method comprising the steps of:

inputting ordering party contract data relating to at least one phenomenon, each

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said phenomenon having a range of future outcomes and a future time of maturity, the contract data including a set of probabilities of occurrence for each outcome in said range and a consideration due to a counterparty at or after the time of establishment;

5           inputting counterparty registering data including a set of probabilities of occurrence for each outcome in said range; and

          pricing and matching a contract for a said phenomenon from said contract data and said registering data, said step of pricing, for each counterparty, including:

          dividing the consideration into integer components are for each component;

10          applying at least one template of entitlement as a function of outcome to the set of probabilities to give one or more individual counterparty prices; and

          applying the ordering party set of probabilities to each individual counterparty template to derive an implied component entitlement;

          said step of matching including:

15          determining which counterparty will provide the best entitlement on maturity by comparing the implied component entitlements with the consideration; and

          matching the contract with the counterparty having the templates for the best said component comparisons.